CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/CEMENT/2016-17 Date: 22.06.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
*AGENCY		**Mr. P. Chennakrishna,** No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.
*NAME OF THE WORK	:	Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE		AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	20.06.2016
PERIOD OF TESTING	:	20.06.2016 to 22.06.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

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Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/SAND-Gradation/2016-17 : 22.06.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. P. Chennakrishna,**
No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.

*** Name of Work** : Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 20.06.2016

Date of Testing : 22.06.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.50	90-100	90-100	90-100	95-100
2.36	74.30	60-95	75-100	85-100	95-100
1.18	53.00	30-70	55-90	75-100	90-100
600 Micron	23.40	15-34	35-59	60-79	80-100
300 Micron	8.70	5-20	8-30	12-40	15-50
150 Micron	2.10	0-10	0-10	0-10	0-15

*Information is furnished by the Customer/Representative.

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/AGG/GR/2016-17 : 22.06.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. P. Chennakrishna,**
No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.

*** Name of Work** : Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 20.06.2016

Date of Testing : 22.06.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.50	95-100	85-100
20	36.05	30-70	0-20
10	12.20	10-35	0-5
4.75	3.00	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/PC/W.No.06/STEEL/2016-17

23.06.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. P. Chennakrishna,** No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.
Name of the Work	:	Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	:	AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016
Date of Test	:	23.06.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.10	O.K	O.K

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Job No.: CTCE/BBMP/PC/W.No.06/STEEL/2016-17

23.06.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. P. Chennakrishna,** No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.
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Date of Test	:	23.06.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.25	O.K	O.K

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Reference	:	AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016
Date of Test	:	23.06.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.40	O.K	O.K

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Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/CUBE/2016-17 23.07.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

***Agency** : **Mr. P. Chennakrishna,** No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.

***Name of the work** : Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016

***Sample ID** : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 23.07.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.06.2016	23.07.2016	8.296	502.7	22.34
2	25.06.2016	23.07.2016	8.374	513.4	22.82
3	25.06.2016	23.07.2016	8.152	485.6	21.58

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Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/CUBE/2016-17 26.07.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

***Agency** : **Mr. P. Chennakrishna,** No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.

***Name of the work** : Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016

***Sample ID** : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 26.07.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	28.06.2016	26.07.2016	8.267	492.6	21.89
2	28.06.2016	26.07.2016	8.359	514.8	22.88
3	28.06.2016	26.07.2016	8.474	521.3	23.17

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Job No.: CTCE/BBMP/PC/W.No.06/CSR-06/070j/CUBE/2016-17 30.07.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*Customer : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

*Agency : **Mr. P. Chennakrishna,**
No.152, 3rd Block, 3rd Stage, Sanegoravanahalli, Basaveshwaranagara, Bangalore – 79.

*Name of the work : Improvements to Roads and Drains at Akashavani Layout Dasarahalli in Ward No.06, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/BSD/BBMP/326/2016-17 Dated: 20.06.2016

*Sample ID : Culvert Deck Slab Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 30.07.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.07.2016	30.07.2016	8.294	515.4	22.91
2	02.07.2016	30.07.2016	8.163	504.3	22.41
3	02.07.2016	30.07.2016	8.357	527.8	23.46

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